UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,253	07/03/2001	Claude Basso	RAL920000099US1	1929

7590	08/03/2004

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EXAMINER
NGUYEN, CINDY

ART UNIT	PAPER NUMBER
2171	18

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>*17 May 2004*</u> .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>*1-24*</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>*1-24*</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>*03 July 2001*</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

In view of the appeal brief filed on 05/17/04, PROSECUTION IS HEREBY

REOPENED. As set forth below.

To avoid abandonment of the application, appellant must exercise one of the following

two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37

CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a

supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or

other evidence are permitted. See 37 CFR 1.193(b)(2).

1.   Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set

forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102
> of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art
> to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 2, 4, 6, 7, 9, 10,12, 14, 15, 17, 18, 20, 22 and 23 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Cohen et al. (U.S 6654741) (Cohen) in view of Risvik (U.S 6377945).

Regarding claims 1, 9 and 17, Cohen discloses: a method, a system and a computer program product for performing a pattern match search for a data string having a plurality of characters separated by delimiters, said method comprising: defining a subset of characters as delimiters such that all remaining characters are defined as non-delimiters (col. 5, lines 31-53, Cohen);

constructing a search key by: generating a full match search increment comprising the binary representation of a data string element (col. 6, lines 51-67, Cohen), wherein said data string element includes a plurality of non-delimiters between a pair of delimiters (col. 6, lines 51-67, Cohen); and

performing a full match search within a lookup table utilizing said search key (col. 6, lines 10-43, Cohen);

in response to finding a match within said lookup table, returning to said step of constructing a search key (col. 6, lines 10-43, Cohen); and

in response to not finding a match within aid lookup table, utilizing previous full match search result to process said data string (col. 6, lines 10-43, Cohen).

However, Cohen didn't disclose: concatenating a pattern search prefix to said full match search increment to form said search key, wherein said pattern search prefix is a cumulative pattern search result of each previous full match search increment. On the other hand, Risvik disclose: concatenating a pattern search prefix. to said full match search increment to form said search key (col. 6, lines 21-38, Risvik), wherein said pattern search prefix is a cumulative pattern search result of all previous full match search increment (col. 5, lines 54 to col. 6, lines 7, Risvik). Thus, at the time invention was made, it would have been obvious to a person of

ordinary skill in the art to include concatenating a pattern search prefix is a cumulative pattern

search result of each previous full match search increment in the system of Cohen as taught by

Risvik. The motivation being to improved technique for parsing searching in character string to

determine the specified characteristic identifier and the specified characteristic value.

Regarding claims 2, 10 and 18, most of the limitations of these claims have been noted in

the rejection of claims 1, 9 and 17 above, respectively. In addition, Cohen/Risvik discloses:

wherein said constructing a search key is preceded by pointing to a character within said data

string (col. 6, lines 49-67, Cohen).

Regarding claims 4, 12 and 20, most of the limitations of these claims have been noted in

the rejection of claims 1, 9 and 17 above, respectively. In addition, Cohen/Risvik discloses:

wherein said method further includes updating said pattern search prefix in response to finding a

matching pattern (col. 11, lines 60 to col. 12, lines 20, Cohen).

Regarding claims 6, 14 and 22, most of the limitations of these claims have been noted in

the rejection of claims 1, 9 and 17 above, respectively. In addition, Cohen/Risvik discloses:

wherein said data string is a Universal Resource Indicator address (col. 6, lines 10-43, Cohen),

and said data string element is a URI element (col. 6, lines 10-43, Cohen).

Regarding claims 7, 15 and 23, most of the limitations of these claims have been noted in

the rejection of claims 6, 14 and 22, above, respectively. In addition, Cohen/Risvik discloses:

wherein said delimiters include period characters or slash characters (col. 5, lines 30-53, Cohen).

3.   **Claims 3, 11, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over** Cohen et al.

(U.S 6654741) (Cohen) **in view of Risvik (U.S 6377945) and further in view of Lucas et al. (U.S**

6012074).

Regarding claims 3, 11 and 19, most of the limitations of these claims have been noted in

the rejection of claims 2, 10 and 18 above, respectively. In addition, Cohen/Risvik disclose:

wherein said constructing a search key further comprises:

in response to a determination that said character within said data string being a delimiter:

delivering a full match search increment into a search key register, wherein said search

increment comprises a binary representation of all non-delimiters between said delimiter and an

immediately preceding delimiter (col. 5, lines 30-52, Cohen); and

incrementing said pointer (col. 7, lines 37 to col. 8, lines 11, Cohen)

concatenating said pattern search prefix to said search increment within said search key

element (col. 6, lines 21-38, Risvik);

However, Cohen/Risvik didn't disclose: evaluating said character within said data string

to determine whether or not said character is a delimiter; in response to a determination that said

character within said data string not being a delimiter, appending a binary representation of said

character to said search increment; and incrementing said pointer. On the other hand, Lucas

disclose: evaluating said character to determine whether or not said character is a delimiter (col.

21, lines 57 to col. 22, lines 13, Lucas);in response to said character not being a delimiter,

appending a binary representation of said character to said search increment (col. 22, lines 5-13,

Lucas). Thus, at the time invention was made, it would have been obvious to a person of

ordinary skill in the art to include step for evaluating character to determine a delimiter or not

delimiter then appending the search result in the combination system of Cohen/Risvik as taught

by Lucas. The motivation being to improved technique for parsing searching in character string

to determine the specified characteristic identifier and the specified characteristic value.

4.   **Claims 5, 8, 13, 16 and 21, 24 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Cohen et al. (U.S 6654741) (Cohen) in view of Risvik (U.S 6377945) and

further in view of Call (U.S 6418441) and further in view of Guha (U.S 5897637).

Regarding claims 5, 13 and 21, most of the limitations of these claims have been noted in

the rejection of claims 1, 9 and 17 above, respectively. However, Cohen/Risvik didn't disclose:

wherein said performing a full match search further comprises: indexing a hash table utilizing

said hash key result to find a matching stored pattern. On the other hand, Call discloses:

indexing a hash table utilizing said hash key result to find a matching stored pattern (col. 9, lines

30-49, Call).

However, Cohen/Risvik/Call didn't disclose: determining whether or not a full match for

said search key exists within said a hash table by: hashing said search key to produce a hash key

result; resolving collisions in said hash table utilizing a pattern search control block. On the

other hand, Guha discloses: disclose: determining whether or not a full match for said search key

exists within said a hash table (col. 7, lines 1-24, Guha) by: hashing said search key to produce a

hash key result (col. 7, lines 30-51, Guha); resolving collisions in said hash table utilizing a

pattern search control block (col. 8, lines 43-56, Guha). Thus, at the time invention was made, it

would have been obvious to a person of ordinary skill in the art to include step determining

whether or not a full match for said search key exists within said a hash table by hashing said

search key to produce a hash key result and resolving collisions in said hash table utilizing a

pattern search control block in the combination system of Cohen/Risvik/Call as taught by Guha.

The motivation being to improved parsing searching by using hashing technique in character string to determine the specified characteristic identifier and the specified characteristic value.

Regarding claims 8, 16, 24, most of the limitations of these claims have been noted in the rejection of claims 6, 14 and 22, above, respectively. In addition, Cohen/Risvik/Call discloses: wherein said step of constructing a search key further include: initializing a URI pointer to a first character within said first URI element (col. 6, lines 10-43, Cohen); and initializing said pattern search prefix to zero (col. 6, lines 10-43, Cohen); scanning an IP data packet to determine a first URI element to by parsed (col. 7, lines 40-55, Call).

5.   *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cindy Nguyen whose telephone number is 703-305-4698. The examiner can normally be reached on M-F: 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7240 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cindy Nguyen
July 26, 2004

WAYNE AMSBURY
PRIMARY PATENT EXAMINER